

PERSONAL INFORMATION

UDBHAV SINGHAL

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Sex MALE | Date of birth 16/08/1995 | Nationality INDIAN

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APPLIED FOR

PhD Position 2021/22 Intake

WORK EXPERIENCE

November 2020 - Present

Researcher (Under National Scholarship Program by Slovak Government)

Pavol Jozef Šafárik University, Košice, Slovak Republic (<https://www.upjs.sk/>)

Prírodovedecká fakulta - Institute of Computer Science

- Analyze gaps in existing knowledge base & formulate research problems.
- Working on a project related to the framework of chatbot (especially designed in Slovak to English and vice-versa), to solve the queries of Incoming International students in cooperation with Neural Network Lab, MIPT (Moscow).
- Participation throughout the whole standard research workflow for the project in Health Care analyzing sleep pattern- dataset creation, data quality check, data pre-processing using approaches such as mean subtraction, normalization, principal component analysis etc.
- To design and assess various machine learning architectures including both state-of-the-art and novel ones (focus put on neural networks).
- Interdisciplinary collaborations with industry partners in joint research projects mainly healthcare and social welfare oriented.
- Active participation at Data Analytics Meetings organized by the Faculty of Science.

Sector: Education & Research

January 2020 – June 2020

Data Science Intern

Scaledesk Webstudio Private Limited, Noida, India

- Co-project management of overarching innovation projects.
- Exploring/developing computational Algorithms.
- Developed the data model for current project based.
- Support in collecting quality data, quality improvements, reporting and root cause analysis.

Industrial Project submitted in award of Master's Degree equivalent to Final Master's

Thesis: *An overview study and exploratory data analysis of SARS-CoV-2 (COVID-19).*

Sector: IT & Infrastructure

June 2017 – July 2018

Associate (Data Analytics Division)

G Cartel Fashion Private Limited, Noida, India

- Analyzed data and recognized trends and key performance metrics.
- Worked as intermediary between operations and business teams and the technical "data" development team.
- Defined standard models and map relevant data sets to represent client assets and processes.
- Supported client needs throughout the project lifecycle, from project initiation to handover.
- Worked with the Service Center delivery leads and delivery managers to resolve escalations.

Sector: E-Commerce & Manufacturing

EDUCATION AND TRAINING

August 2020 -September 2020

Summer School in Spatial Planning and Transportation Engineering

ECTS Credits (3) Status: PASS

Aalto University School of Engineering, Finland

- Worked towards Towards Integrated, Customized and Automated Mobility Futures project.
- Proposed an idea along with 3 team members on LED infrastructure for Greater Helsinki Travel Safety (LIGHTS) during winters to the Transportation department, Helsinki and mobility hub.
- Problem: During the winters, around 20,000 people a month in Finland sustain an injury as result of slipping on Ice especially, in the area of Jatkassari.

July 2018 – June 2020

Master of Technology in Computer Science & Engineering with specialization in Data Analytics

CGPA: 7.8/10 (78%)
Total Credits (70)

Jaypee Institute of Information Technology, Noida, India (www.jiit.ac.in)

RELEVANT COURSEWORK

- Machine Learning and Data Mining
- Web Algorithms
- Cloud Based Big Data System -I, II
- Nature Inspired Computing
- Large Scale Graph Analytics
- Research Methodology

July 2013 – May 2017

Bachelor of Technology in Electronics and Communication Engineering

First Division
CGPA: 7.40/10.00 (70.3%)
Total Credits (241)

Deenbanbhu Chhotu Ram University of Science and Technology, Murthal, Haryana, India (www.dcrustm.ac.in)

First Class UK Equivalent; Top 10% of Students

RELEVANT COURSEWORK

- Computer Architecture & Organization
- Microelectronics
- Graph Theory
- Object Oriented Programming
- Analog Electronics
- Antenna and Wave Propagation

PERSONAL SKILLS

Mother tongue(s)

Hindi

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
Highest Degree Taught in English Language					
Spanish/French/Slovak	A1	A1	A1	A1	A1
Spanish Language A1 Certificate – Instituto Cervantes, Nueva Delhi with Notable (7/10) French A1, coursework at the university - B+ Grade					

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- Good communication skills gained through my experience as a volunteer/assistant in the Study Abroad Education Fair and at the Embassy.

Organisational / managerial skills

- Supervised team of more than twenty students in studying higher education abroad.
- Hosted coffee sessions among other peers and the attendee at the conference virtually.

Computer skills

- Software: Arduino IDE, MATLAB (Basics)
- Language Skill : C, C++, R , Python
- Database : MySQL, Cassandra, MongoDB, HIVE, HBase
- Hands on : Microstrategy, TABLEAU , SPSS, SAS, NVivo, MS Office

ADDITIONAL INFORMATION

- Publications**
- "Design and Simulation of Half Vivaldi & Full Vivaldi Antenna for Mobile Applications," *Abhishek Garg**, *Udbhav Singhal**, DOI: 10.18535/ijssrm/v4i8.10.
- Projects**
- ★ *Undergraduate Project*
 - **IoT (Internet of Things) Based Air Quality and Temperature Monitoring System.**
 - ★ *Data Analytics Project*
 - **MyScholar - An Entrepreneurship project**
The main purpose of this product is to provide a user-friendly interface and working environment to maintain the details of the research scholar's and professors with their analytical details.
 - **Data Analysis of high crime spots using density-based clustering.**
In this project, Spatial and temporal analytics performed to find the criminal hotspots. Here we have analyzed two different crime datasets for Chicago, IL and San Francisco, CA and provided a comparison between the two through a statistical analysis supported by several graphs on different parameters.
 - **Deep Learning with Big Data: An Age and Gender Detection System**
The proposed work uses Big Data Analytics (Apache Spark) with VGG16 and Inception v3.
Our result indicate that the Deep Learning with Big Data can be integrated to improve the efficiency and solve complex problems based on the predicted values. Dataset: <http://www.cslab.openu.ac.il/download>
 - **Prediction of Electricity Consumption using Multivariate Time Series Analysis**
Forecasted the "Electricity Consumption" using multivariate analysis for the next few next days for estimated need of electricity; Used different models like (Linear Regression, Huber Regression, Elastic net etc.)
 - *Dissertation*
 - **Link Prediction in Online Social Network Using Harris Hawks Optimization Technique.**
- Seminars and Conferences**
- Attended "Global FinTech Conference 2019" hosted by Ramanujan College, University of Delhi, INDIA.
 - Invited for Si-Five & Open -Silicon India Tech Symposiums 2018.
 - Participated in various Conferences, Special Talks on Technology, Waste and Energy Management Women Empowerment and Social Justice at American Center, New Delhi.
- Honours and awards**
- Finalist at Open Doors: Russian Scholarship Program 2019-2020 in Computer & Data Science.
 - Received ALife Student Scholarship Award 2020 from The Vermont Complex Systems Center, The University of Vermont (USA).
 - **RDS@GSU Data Certified** - Georgia State University Library, Spring 2020.
 - **MicroStrategy Certified Analyst** (April 3,2020 -April 3, 2023)
 - Selected for EEML 2020 (Eastern European Machine Learning Summer School, 2020), M2L Winter School 2021.
 - Received Travel Grant to attend the Advanced School 2022 on Quantum Fluids and its applications at IFSC (School of Physics), São Carlos.
 - Selected as a Fellow, Data Science - São Paulo School of Advanced Science on Learning from Data 2019 at Institute of Mathematics and Statistics, University of São Paulo (USP), Brazil.
Also did an Oral Presentation entitled "Link Prediction in Social Network using Genetic Algorithms" in "One Minute Lightening" Session.
 - Received full scholarship for Bumblekite Online Program in Healthcare data and AI Policy. Worked on the project idea proposed by **Dutch Government, Ministry of Health** to improve their health care system data policy among stakeholders.

- Received Appreciation Award for the selection at the SMART INDIA HACKATHON GRAND FINALE 2017 (WORLD BIGGEST MOVEMENT)- developed project as a team at Udaipur to prevent delay in trains due to fog in winters under Ministry of Railways, Government of India.

Membership

- Professional Member- ACM (Association for Computing Machinery)., American Statistical Association, Institute of Mathematical Statistics.
- Member- IAENG, Data Society (Washington D.C.)
- Former Affiliate Student Member- IMechE (April 2017 - Dec. 2017)
- E- Student – Royal Statistical Society (RSS)

Social Service/Volunteering

- Worked as a Coordinator for the 3-day workshop on "Big Data Systems, Tools and Applications" (December 17th-19th 2018) and "Computational Methods for Medical Image Analysis" (April 18th-20th 2019) respectively, and National Symposium on "Intelligent Systems - Techniques and Research Applications" at IIIT, Noida.

Duties Assigned :

- Help at the registration desk, Packing giveaways along with the other material.
 - Photography
 - Accommodating guests in the hall
 - Miscellaneous duties as assigned
- Worked as volunteer with Begin Group - Moscow (Event Assistant) at Begin Education Fair March - November 2019, New Delhi (Promoting Higher Education Abroad), EduactionUSA@USIEF Fall 2019 Education Fair, New Delhi (plus School and University visit) respectively.
 - Worked as a Social Media Campaigner for Linden Education Services, USA.
 - Assisted German Centre for Research and Innovation New Delhi (DWIH) at the Indo-German Symposium (Future of Work) 2019, New Delhi.
 - Desk Assistant at ISN American Education Expo 2020, Delhi.
 - Pre-conference/conference volunteer at ICLR 2020, ICML 2020 (organised a coffee-session as a host with students, researchers, and scientist all around the world), ACM RecSys 2020.